



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

SD

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/681,891	06/21/01	LIN H	13558-51

025716 QM02/1019  
BLUMENFELD, KAPLAN & SANDWEISS, P.C.  
168 NORTH MERAMEC  
4TH FLOOR  
CLAYTON MO 63105-3763

EXAMINER  
PELHAM, J

ART UNIT	PAPER NUMBER
3742	

DATE MAILED:

10/19/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/681,891

Applicant(s)

LIN ET AL.

Examiner

Joseph M Pelham

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-26 is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 3742

***Claim Rejections - 35 USC § 112***

1. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-3 recite the intended use of the invention in a sub-zero degree temperature environment, but do not, however, impose any evident further limitations on the structure of the invention. Hence claims 2 and 3 fail to further limit the scope of claim 1, and their scope is therefore indefinite. Moreover, claim 1 recites a "target object...located in an environment of...temperatures...below 0° C," implying that the sub-zero temperature environment is part of the invention, and that the heater is manufactured in such an environment. The scope of the claim is thus unclear.

***Claim Rejections - 35 USC § 102***

2. Claims 1-5, 7, and 10-13 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5308311 to Eggers et al.

Referring to Figure 2, column 5, lines 46-58, column 6, lines 48-50, column 8, lines 6-23, and column 9, lines 37-41, Eggers et al discloses a copper substrate 21, metal oxide dielectric layers 17, 18, a polymer based resistive heater 16, and operating temperatures (up to 500° C) clearly implicating power densities in excess of 200 watts/in<sup>2</sup> for a target blade of dimensions approximately 2-4 cm<sup>2</sup>. Further, the blade is inherently operable at temperatures below -150° C.

***Claim Rejections - 35 USC § 103***

3. Claims 6, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggers et al.

While Eggers et al does not explicitly disclose aluminum, ceramic, or steel substrates, such cannot be regarded to patentably distinguish the invention from the prior art of record. Eggers et al discloses the appropriateness of applying the heater structure to a rigid substrate. It would have been obvious to apply the heater of Eggers et al to aluminum, ceramic, or steel substrates depending strictly upon the particular use intended for the heater, such as a ceramic cooktop or stainless steel or aluminum kitchen implements.

***Allowable Subject Matter***

4. Claims 14-26 are allowed.

***Conclusion***

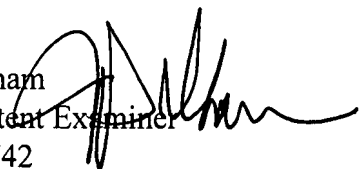
5. The prior art cited below is pertinent to Applicant's disclosure. The examiner urges, for the sake of expedient prosecution, that the following prior art be considered in conjunction with the previously cited prior art when responding to this action.

U.S. Patents 6222166, 6233817, 6137089, 6121585, 5181006, 4857384, 5475199, 5889261, and 5859581 all disclose highly pertinent thick film resistive structures.

Art Unit: 3742

Any inquiry concerning this communication should be directed to Joseph Pelham, at (703)308-1709. Status inquiries of a general nature should be directed to the Technology Center 3700 receptionist at (703) 308-0861.

Joseph Pelham  
Primary Patent Examiner  
Art Unit 3742



JP  
October 17, 2001

Attachment for PTO-948 (Rev. 03/01, or earlier)  
6/18/01

**The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.**

**INFORMATION ON HOW TO EFFECT DRAWING CHANGES**

**1. Correction of Informalities -- 37 CFR 1.85**

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

**2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.**

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made other than correction of informalities, unless the examiner has approved the proposed changes.

**Timing of Corrections**

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a)

Failure to take corrective action within the set period will result in **ABANDONMENT** of the application.